



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,201	08/02/2006	Andrew Maunder	09875.0274	9270
22852	7590	12/02/2009		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HAGEMAN, MARK	
			ART UNIT 3653	PAPER NUMBER
			MAIL DATE 12/02/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/565,201

Applicant(s)

MAUNDER, ANDREW

Examiner

Mark Hageman

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2 033 881 to Harris. Harris discloses removing a portion of the loose particles from the batch, including removing loose contaminants and fines that are separable from both the pellets and the defective pellets, the fines being of the same material as the pellets and the loose contaminants having material characteristics that are undesirable for the product (page 2 lines 76+); after the removing of a portion of the loose particles including fines and contaminants, detecting in the batch the defective pellets and additional loose contaminants, the defective pellets being inextricably attached to embedded contaminants; and removing the defective pellets and the additional loose contaminants from the batch (page 2 lines 5+). Examiner contends that when the device is used for sorting pieces of ore (page 1 lines 106+) that the dust and dirt removed will contain small particles of the ore as it does not discriminate and will remove all material of a certain size/density that can be dislodged and carried away.

Re claim 8 the removing of a portion of the loose particles from the batch includes removing clean fines (page 2 lines 76+).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of US 6,817,474 to Ikeda. Harris discloses all the limitations of the claims except the removal of ferrous material by magnetic means, optically scanning the batch for evidence of the embedded contaminants, and the pellets are used to extrude at least one of polyethylene, crosslinked polyethylene, tree-retardant crosslinked polyethylene, linear low-density polyethylene, propylene/ethylene thermoplastic copolymers, ethylene/vinyl acetate (EVA) copolymers, ethylene/methyl acrylate (EMA) copolymers, ethylene/ethyl acrylate (EEA) copolymers, ethylene/butyl acrylate (EBA) copolymers, ethylene/(~olefin copolymers, and polypropylene. Ikeda discloses removing further contaminants containing ferrous material from the batch (c2 lines 22+), the removing of further contaminants containing ferrous material occurs before the removing of the defective pellets from the batch (c2 lines 23+ and figure 1), the removing of further contaminants containing ferrous material comprises using at least one magnet (9) for the purpose of effectively removing metal/iron items in addition to damaged or unwanted pellets (c1 lines 45+).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Harris to include the magnetic separation, as taught by Ikeda, for the purpose of effectively removing metal/iron items in addition to damaged or unwanted pellets.

Re claim 4 the removing of further contaminants containing ferrous material occurs after the removing of the defective pellets from the batch. While Ikeda teaches the magnetic removal before the removing of the defective pellets from the batch it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have changed the sequence of the separations. Each operation still achieves its independent predictable result and doing so would lower the workload of the magnetic separator as it would not be exposed to dust and unwanted pellets that would already be removed.

Re claim 11 Ikeda discloses the detecting of the defective pellets and additional loose contaminants comprises optically scanning the batch for evidence of the embedded contaminants (c4 lines 25+).

Re claim 14 the pellets are used to extrude at least one of polyethylene, crosslinked polyethylene, tree-retardant crosslinked polyethylene, linear low-density polyethylene, propylene/ethylene thermoplastic copolymers, ethylene/vinyl acetate (EVA) copolymers, ethylene/methyl acrylate (EMA) copolymers, ethylene/ethyl acrylate

(EEA) copolymers, ethylene/butyl acrylate (EBA) copolymers, ethylene/(~)-olefin copolymers, and polypropylene. While Ikeda does not explicitly reference these materials usage of the method with such materials would have been obvious to one of ordinary skill in the art at the time of the applicant's invention. Ikeda discloses use with resin pellets and therefore it would have been obvious to use the method with specific resin pellets as needed.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of Ikeda as applied to claims 2-5, 11 and 14 above, and further in view of US 6,540,088 to Oder. Harris in view of Ikeda discloses all the limitations of the claims except the at least one magnet comprises a rare earth material and the rare earth material comprises at least neodymium-iron-boron. Oder discloses the use of a neodymium-iron-boron magnet in a magnetic separator (c8 lines 33+) in order to achieve large forces (c8 lines 35+).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Harris in view of Ikeda to include a neodymium-iron-boron magnet, as taught by Oder, in order to achieve large forces.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of US 4,631,124 to Paulson. Harris discloses the removing of a portion of the loose particles from the batch comprises: air-washing the batch to lift the loose particles; and providing a circulating air flow to the batch to remove the loose particles (p2 lines 76+

and p2 lines 103+). Harris does not disclose disrupting electrostatic bonds between the loose particles and the pellets and defective pellets. Paulson discloses disrupting electrostatic bonds between the loose particles and the pellets and defective pellets (c2 lines 40+) in order to release the dust from primary particulate material for removal (c2 lines 40+).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have modified Harris to the step of disrupting electrostatic bonds between the loose particles and the pellets and defective pellets, as taught by Paulson, order to release the dust from primary particulate material for removal.

Response to Arguments

6. Applicant's arguments filed 8-31-2009 have been fully considered but they are not persuasive. Applicants stated that none of the references used in rejecting the claims disclose the removal of both fines (made of the same material as the pellets) and contaminants. Examiner disagrees and, as set forth above, contends that when the Harris device is use to sort minerals such as ore (disclosed at p1 lines 106+) that the dust removed will contain particles of the mineral material. The preparation of ore for such a sorting process (and indeed the mining process in general) requires size reduction steps that produce dust and fines that adhere to the desired particles. Examiner also notes that the Harris device does not differentiate different types of dust and dirt so any material of a certain size/density will be removed the combination of the positive and negative air flows.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Hageman whose telephone number is (571) 272-3027. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick H. Mackey/
Supervisory Patent Examiner, Art
Unit 3653

MCH